Strengthening Customer Service at Seattle City Light

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Executive Summary

In April, May and June of 2002, customers raised questions about and the media covered billing issues at Seattle City Light. In response, Mayor Greg Nickels directed City Light to make a variety of improvements, saying, "For every single customer, we should strive to do our best – when we fall short, we don't make excuses; we make it right."

This attention resulted in a thorough review of processes and practices at the utility with an eye toward determining problems, their root causes, and solutions that result in a satisfied customer with a timely and accurate bill.

The first step in the review process was to determine if the new Consolidated Customer Service System (CCSS), which was jointly implemented by Seattle City Light (SCL) and Seattle Public Utilities (SPU) on April 2, 2001, works properly as designed. This quality assurance audit, performed both internally and subsequently by an IBM consultant, found that the computer accurately calculates billable consumption, assigns the proper electric rate, and accurately calculates energy charges, resulting in a mathematically correct bill total. A change in the computer parameters that was intended to more closely calibrate the charges that kick out for human scrutiny resulted last winter in two days of exceptionally high bills being sent to customers. Once the issue was understood, the parameters were readjusted to avoid this type of problem in the future.

An analysis of high bill complaints received during the high bill period resulted in identification of the following six key billing and customer service problem areas:

- Some business processes are not sufficiently detailed and clearly designed to meet the requirements of CCSS, resulting in bottlenecks, bad bills and no bills for a small percentage of customers;
- Backlogs that developed due to the fundamental change in business process design, from a post-bill to a pre-bill audit function, and significant increase in daily workload, have multiple system consequences, including customer dissatisfaction and worker frustration;
- Auditing needs to be beefed up in order to increase review of information uploaded into CCSS to create an accurate bill with confidence;
- Some meters are hard-to-access, resulting in estimated or missed bills;
- Some high volume processes could benefit from technological improvements, such as software upgrades and fixes, that will increase efficiency and effectiveness;
- Training needs to be ongoing to meet the challenges of high customer expectations, radically altered computer technology, and business practice changes.

SCL set about to rectify these problems and has made significant progress to date as well as identifying other near and long term solutions. They include:

1. Business processes, especially high volume ones, are being reviewed so that work can be streamlined and performed uniformly utility-wide. A stunning example of success is meter exchanges, a routine business activity that occurred approximately 4,500 times in 2001. Under a new, improved business process developed by staff in the affected organizations, this work is being done within a precise window of time in the billing period, reducing the exception rate dramatically and vastly increasing the ability to produce a timely and accurate bill.

2. Backlogs have been virtually eliminated in two key area of high-volume work: meter installs/exchanges/removals; and applications for electric service (RESAs). Goals have been set for the elimination of backlogs in other areas that have extremely high daily volumes of work. This is being accomplished through hiring of new employees, temporary loaned employees, addition of TES, and overtime. In 2003, we propose to maintain a backlog-free process with the addition of 13 staff requested in City Light's budget proposal. Our objective is to staff and manage to the higher average daily workload as a result of the pre-bill audit function in CCSS.

3. The new CCSS system has a rigorous pre-bill audit, which introduced a new body of high volume work, and meter installations are routinely audited to ensure they are working and billing properly. We have added new audit routines for greater quality assurance, including reviewing the highest bills each day, routinely monitoring and troubleshooting the monthly bills of our largest key customers, and ensuring that our new multi-family installations are billing timely and appropriately. Our budget request also includes an auditor that can advise on department-wide protocols to increase quality assurance.

4. We are purchasing meters that can be read via radio frequency using the current hand-held Itron device deployed by the meter readers. This allows meters to be read remotely, that is, outside a locked building or gate, thus ensuring an actual read for billing purposes. Meter readers will begin implementing this new technology in 2003.

5. We have been working with the billing software vendor and other utilities to identify key improvements that will be included in the next upgrade, likely occurring in late 2004. The upgrade had been planned prior to the "high bill" period, and will support the business process improvements identified above. Other areas where software improvements are being sought are processes to set up and close accounts and budget billing. As we work on long-term IT improvements, we will also develop interim solutions for the most urgent matters. For example, on budget billing, we will review accounts on a semi-annual basis and revise budget billing amounts according to recent consumption history.

6. We view training as an ongoing process that will assist employees at all levels to access and learn new tools and practices for customer relationship building, problem solving, and reinforcing the importance and value of internal customer service. It will also provide a learning opportunity for the utility as employees identify systemic and organizational barriers to excellent customer service.

7. We will redouble our effort to make courtesy and customer service a top priority. This includes communicating regularly with the public on matters of concern for them individually and collectively.

These efforts will help us to meet our goal of satisfied customers who receive accurate and timely bills. We are committed to being a public utility in which our customers/shareholders have confidence and pride.

Strengthening Customer Service at Seattle City Light

In April, May and June of 2002, customers raised questions about and the media covered billing issues at Seattle City Light. In response, Mayor Greg Nickels directed City Light to make a variety of improvements, saying, "For every single customer, we should strive to do our best – when we fall short, we don't make excuses; we make it right." This report provides an analysis of the billing issues that were presented as well as corrective actions that have been implemented or are under development.

Background

Seattle City Light has approximately 356,000 customers in its service territory, with about 90% residential and the remainder a mix of commercial and industrial users. Approximately 2.5 million bills will be sent to customers this year, or about 208,000 per month. Similarly, in the past ten years the number of meter reads has increased from just over 2 million to 2.3 million meter reads. The downtown area and some outlying industrial/commercial customers receive monthly electricity bills; the bulk of the residential and other commercial customers are billed bi-monthly.

Generally speaking, a bill starts with the set-up of an account (install meter, set up the premises, identify customer), the reading of registered consumption by a meter reader, the uploading of data from the reading device (called Itron) into the computerized billing system, and the creation of a bill for each meter. The mundane recitation of this billing process understates the number of individuals and organizations that perform unique pieces of work and the orchestration of data and events that must occur to produce an accurate and timely bill.

Organizational units at Seattle City Light that are responsible for initializing service, setting meters and producing bills generally reside in the Customer Services and Distribution Branches, with the computer support for the billing system residing in the Finance and Administration Branch. In addition, the Utility Call Center, which handles the large proportion of customer calls ranging from a move in or move out to a billing complaint, resides in Seattle Public Utilities.

On April 2, 2001, both Seattle City Light and Seattle Public Utilities adopted a common billing system called Consolidated Customer Service System (CCSS). The utilities replaced their separate mainframe-based billing systems to better support a combined call center with a unified customer database and to replace obsolete technology with a commercially viable product. The vendor that supplied SCL's previous system went out of business in 1994.

Prior to April 2, 2001, Seattle City Light used a computer system called CIS to produce bills. This system allowed bills to be sent to customers with the assumption that corrections could be made after-the-fact, should the customer bring an error to our attention. The new system does not allow a bill to be produced that does not meet certain criteria, called parameters. Instead, the system creates an "exception" which must be reviewed by personnel in the Validation Unit of Account Services. There is a three-day window in which the consumption must be reviewed by a human being and either be approved or changed in order to produce a timely bill. If that timeframe is not met, the account either 1) stays as an exception until it is manually cleared,

which with backlogs can result in no bill being produced; or 2) receives an auto-estimated bill which is done by the computer based on previous history.

Knowledge of this sea-change in practice is necessary in order to understand the clash of human behavior and electronic requirements that were experienced by workers during the changeover in software from CIS to CCSS, i.e., changing to a pre-bill exception processing format (CCSS) from a post-bill exception process (CIS). There are other substantial changes as well in areas such as budget billing, bill correction, move in/move out, and meter install/exchange/removal. During the transition to CCSS, business processes were developed for the Customer Services Branch functions and a robust training program was offered. However, there is a difference between developing business practice based on theory versus based on how the computer logic really works, given day-to-day customer and account situations. Not enough emphasis was placed on back office functions for both the Customer Services and Distribution Branches during business process development and training. It is clear that a change of this magnitude takes many months to learn intellectually, adapt to behaviorally and experience/comprehend consequences. In fact, to this day, we continue to learn things about how CCSS works relative to its predecessor system and to modify and adapt our business practices accordingly.

In the fall of 2001, the City froze vacancies, resulting in 11 fewer filled positions in Account Services, mainly in the Customer Accounts work groups that deal with billing, account maintenance, and billing adjustments. This factor, coupled with the new processes, the sizable daily exceptions that needed to be worked, the additional time required to do the work in CCSS, and the complexity of processing meter exchanges and tenant/residence changes, resulted in backlogs developing in almost every aspect of work. These backlogs were increased in winter by customer complaints to the Call Center and others resulting from several factors in addition to the computer: a 58% rate increase in the year 2001, a new third tier for residential high electricity users, and a colder winter resulting in higher consumption for some customers, especially households with electric heat. The backlogs increased again in 2002 as a result of the media stories.

This combination of factors resulted in customers scrutinizing their bills more closely than historically experienced and resulted in a substantial increase in calls to the utility and resulting service orders. Service orders are the vehicle for one organizational unit to request work from another unit. For example, if the Call Center talks to a customer regarding a high bill, two service orders can result, one for a check read, another for a meter test. These efforts may then result in a service order for a billing adjustment. If the information required to make the adjustment is not completed in a timely or coordinated manner, the adjustment may not be done in a reasonable period of time and will add to the backlog of exceptions. And the customer may call again, often prompting another set of service orders for the same issue. This spiraling situation is one that we are taking many active steps to remedy.

The Media Spotlight

The story that began a six-week period of intense media scrutiny was about a Magnolia resident whose consumption had been estimated or misread for a year, resulting in a large catch-up bill when a good actual read occurred in January of 2002. The catch-up bill included $1,584.80 of third tier charges, bringing her bi-monthly bill to $2,238.69. This one account symbolizes the panoply of human, technical and policy issues that can affect a bill – a missed or "bad" meter read, exceptions that get caught in backlogs, estimated bills, and a new third tier rate structure.

The customer's bill was eventually adjusted, and her situation was very instructive for the other cases that followed.

This event triggered a chain of events that culminated in a comprehensive review of the entire billing process and a series of changes intended to prevent, to the maximum extent possible, future problems. It also triggered a mandate from the Mayor that the utility address customer complaints within two weeks and in the customer's favor if the complaint is not dealt with in that timeframe.

City Light's Response

City Light immediately responded to the Mayor's directive by taking the following steps:

- The computer billing system was audited by IBM to confirm that it performed the calculation of bills properly;
- Additional staff in Account Services (Customer Accounts work group) was authorized to provide a more thorough manual check of bills and exceptions;
- All credit and collection actions were held while we ensured that customers working with the utility or in active dispute were not disconnected;
- Focus was increased on auditing data entered into the computer system

City Light also actively tracked customer complaints to ensure timely handling and adjustment of bills when appropriate. During the period of April 1 through June 1, we tracked 342 cases. Of those, 295 were handled at the administrative level, with 181 customers receiving billing adjustments. The remaining 47 customers were referred to the Hearing Officer.

In addition, a City Light team met regularly with Superintendent Zarker to review policies, systems and practices; report on findings; provide status reports on customer issue resolution; and develop new ways of doing business. This group continues to meet and expand its membership as emerging issues develop and need resolution.

Billing System Assessment

An aspect of the media attention on high bill complaints was the report of the failure of a CCSS "filter" that allowed unreasonably high bills to be sent to customers. SCL staff adjusted the parameters in January, leading to the unintended consequence of producing bills even in cases where the associated meter reads were unreasonably high. This problem primarily affected bills created on January 31 and February 1 of 2002. Before the parameter adjustment, CCSS was instead producing exceptions on these types of high meter reads, allowing scrutiny and, if appropriate, adjustment, by a human being before the bill was sent. Once the issue was understood, the parameters were readjusted to avoid this type of problem in the future.

While there was no indication that CCSS was inaccurately calculating bills, reasonable questions were being raised. The system is relatively new and necessarily complex from a technical standpoint. SCL information technology staff undertook quality assurance reviews of the system's bill production components. These included consumption estimating tools, prorated billing algorithms, system rules and validation tables, and data integrity from meter reading to billing. System defects were not encountered as a result of this review.

As an additional quality assurance measure, IBM was engaged to perform an independent assessment of the key bill calculation programs. CCSS is actually a commercial software package called Banner, produced by Systems, Computers and Technologies, Inc. (SCT). IBM has experience with the implementation of Banner systems, including work on the City's CCSS project.

An IBM analyst spent approximately one week assessing the system. The scope of the assessment was structured to determine whether, given a set of meter reads (actual or estimated), does CCSS:

1. Accurately calculate billable consumption?
2. Properly apply (and prorate) the assigned electric rate?
3. Accurately calculate energy charges?
4. Add all consumption charges and other fees together to arrive at a mathematically correct total bill?

The testing concentrated on production bills that were produced for electric residential customers on April 12, 2002. IBM developed a list of account attributes that could effect the way in which a bill is calculated (consumption levels, assigned rate, rate period, days of service). Test cases were developed by varying these account attributes in every possible combination. Consistent with SCL's expectations, no billing calculation errors were discovered in any of the IBM tests.

High Bill Issues

An analysis was performed on 80 of the high bills that were adjusted during the tracking period in an effort to understand what gave rise to the customers' complaints and how the issues were resolved. The complaints were then categorized by "reason", with the following results:

Meter exchange with resulting problems	16
One-time misread resulting in high bill	15
One-time estimate resulting in high bill	10
Series of estimated reads with no apparent cause	10
Move in/move out billing issues	8
High consumption with no apparent cause	7
Hard-to-access meter (locked gate, bad dog, etc.)	6
Two or more high misreads	5
Other meter issues (wrong meter read/removed, etc.)	2
Third tier adjustment	1

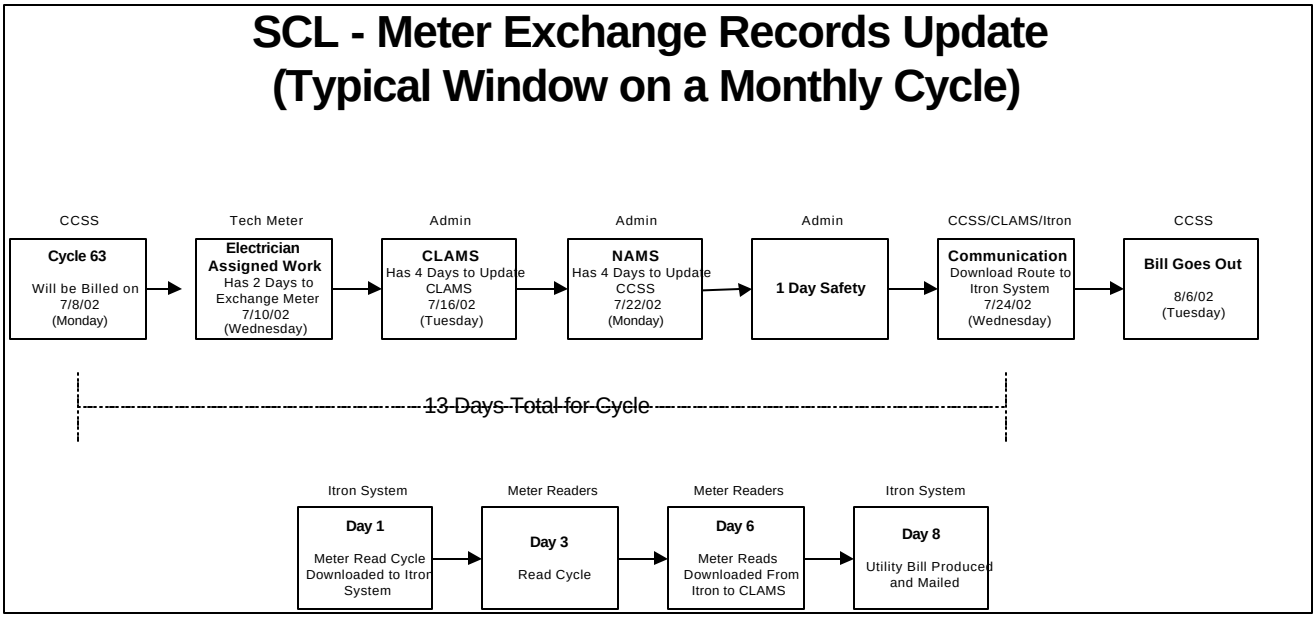
Steps are being or have been taken to address these issues. They fall under the headings of Meter Exchanges, Other Business Process Improvements, Eliminating Backlogs, Developing Audit Routines, Developing New Metering Strategies, and Information Technology Improvements, which are described below.

Meter Exchanges

Of all meters exchanges conducted by City Light annually, about 75% are for routine maintenance as opposed to responses to customer requests. Examples are to install special meters for MeterWatch or for rate studies and to replace obsolete meters. In 2001, 4,519 meters

were exchanged. A series of steps has to be taken to ensure that the old meter is removed and the new meter installed during a specific window in the billing cycle in order to prevent billing problems. During this window, data must be entered and checked for accuracy in the meter inventory system (called CLAMS) by Power Systems Technology in the Distribution Branch, sent to New Accounts and Meter Sets (NAMS) in the Customer Services Branch to update CCSS, get downloaded into Itron so a meter reader can read the new meter during the next regular cycle, and then get uploaded into CCSS so a bill can be produced. When this process does not occur perfectly and within the window (which is quite brief for commercial monthly billings and a little more generous for bi-monthly billings), a series of events occur which generally results in estimated bills or no bills and an eventual actual read that might produce a catch-up bill.

The organizations within City Light who do this work have developed a new, improved business process that streamlines the work and provides that the 75% controllable meter exchanges occur during the CCSS window. In addition, the backlog of meter exchange work in New Accounts and Meter Sets (NAMS), a unit in Account Services, has been eliminated. The new process and the elimination of the backlog have resulted in stunning successes recently. Of 400 meters recently installed for commercial rate survey purposes, only seven exceptions occurred. This rate compares to a 50% average exception rate since the computer conversion on April 2, 2001.



This improvement will also have a positive effect on various work groups: the Validation Unit will have fewer exceptions to process; New Accounts and Meter Sets will have fewer exceptions to clear when entering meter data into CCSS; and the Call Center should get fewer calls from disgruntled customers.

Other Business Process Improvements

City Light is using consultant assistance to review and revise our business processes from beginning to end in order to streamline activities, identify bottlenecks and dead ends, and determine best practices that can be formalized utility-wide. Using the business processes developed prior to the computer conversion, we can now provide more specific and more accurate steps in the process based on actual experience with the computer system. The

consultants worked directly with employees performing meter work, exception processing, and other billing functions to understand the flow of business and the nature and timing of hand-offs from one unit to another. The meter exchange improvements are a significant example of how finding and fixing the root cause of a problem can positively impact many downstream outcomes. The consultants investigated high priority, high backlog areas that created problems, focusing in on what causes exceptions and what it takes to clear exceptions. That study produced a series of recommendations based on interviews with personnel in every aspect of the metering and billing processes. They then worked with staff to identify key areas that had the greatest potential for business improvement:

- Processes that issue bills and fix exceptions
- Processes that establish new or change premises (service address)
- Resolving CLAMS/CCSS/Itron interface exceptions (meter exchanges/removals)
- Processes for move in/move out

The consultants also identified the need for better reporting in order to provide management and workers tools for triage and quality assurance. The work plan for the remainder of the year includes refining the handoffs and timing for meter exchanges; developing a report strategy; developing desk procedures; creating more tools for the staff in Customer Accounts; and reviewing service orders by type with an eye toward improving the ease and timeliness of requesting work and closing the feedback loop.

Eliminating Backlogs

A key factor in improving our customer relations is eliminating backlogs that prevent a prompt and accurate response to customer questions and requests. As mentioned above, after the switch to CCSS, backlogs developed in almost every aspect of Account Service work in the Customer Services Branch, especially Customer Accounts, due to a variety of factors: the learning curve associated with the new system; the fact that most tasks take more time input in CCSS than in the predecessor system; the complexity of the CCSS processes for high-volume work; and the reduced staff to perform the work.

The Distribution Branch continues to concentrate on providing rapid response to service orders and reducing the backlog. Over the last three months, the Distribution Branch averaged approximately 500 new service orders per week. A similar number was closed per week (not necessarily the same ones.) Most service orders currently in process in the Distribution Branch are less than 30 days old. The Branch has also developed special management tools to track work activities recognized as being critical to customer satisfaction. One such tool tracks specific service orders relative to high bill complaints, check reads and move in/move out processes. Performance goals have been established for each of these components.

During the first two quarters of 2002, a great deal of emphasis was placed on measuring performance in Account Services. This activity started up in May and is being refined as weekly reporting occurs. The performance measurement system includes determining a goal or standard for getting work done and reporting against that goal. A sample report is included as Appendix A to this document. Appendix B provides information specific to low income programs. We fully expect this report to improve as we get better at identifying additional key processes that

should be measured and begin measuring department-wide rather than as a single Customer Services Branch of City Light.

A concerted effort to eliminate backlogs has resulted in a substantial reduction of backlogs in two key areas impacting our ability to provide timely and accurate bills: processing meter exchanges and removals and Residential Electric Service Applications (RESAs). RESAs are the forms customers complete to open, close or transfer their electric accounts. RESAs can be mailed, faxed, or filled out on-line and delivered through a web-based form. They are primarily used by landlords or by customers who are tenants in multi-family buildings. Customer Accounts received 47,813 RESAs since October 1, 2001, or 190 RESAs per day. This compares to about 33,000 RESAs received in 1995 and 1996. (Customers can also open and close accounts by means of a phone call to the utility Call Center.) Opening and closing accounts is much more cumbersome in CCSS and requires more time than CIS did, in part because we are able to include information such as telephone numbers and underlying property owner as part of our baseline customer account information. This was not possible in the old billing system. With the help of TES employees and employees in other units, we have eliminated the backlog and currently have eight people assigned to this work.

We receive approximately 28 meter exchanges, installs and removals each day and have been able to process only about 15 per day. With the use of three TES, we have reduced the backlog to slightly over one week.

Two areas that continue to have high backlogs are the processing of meter exceptions and billing adjustment service orders. Due to the complexity of making billing adjustments and the high volume of daily exceptions, our current goal is to eliminate the backlogs by the end of the year. We hope to accomplish this goal through the filling of vacancies that are now unfrozen, the temporary addition of borrowed staff from various units, TES, and overtime on Saturdays. Any new tools developed for the Validation Unit will also assist to speed up processing and reduce the backlog.

In the 2003/04 budget request to the Mayor, City Light has asked for 13 new positions in various units of Customer Accounts to help us get and stay current in all work activities, to pro-actively audit and conduct quality assurance control, and to strengthen our customer contact both verbally and in writing. The latter capacity is practically non-existent in the current stretched environment.

Credit and Collections is another area of emphasis for reducing backlogs. The backlogs in this case developed due to the suspension of these activities last April. As a result, active and inactive customers with delinquent accounts have not received Urgent or Shut-Off Notices and inactive accounts have not been forwarded to the city's new collection agency. Consequently, many customers have large past due balances on their bills.

A new strategy for addressing these issues has been developed and is being implemented. The overriding philosophy of the new strategy is to make every attempt to get customer accounts current and keep them current through the following steps:

- Inactive delinquent accounts greater than $50 are being sent to the new citywide collection agency as of 9/13/02. As of March 31, 2002, there were 20,389 closed accounts with balances greater than $50. The first batch of 1,560 accounts with the highest dollar amounts,

a total of approximately $1 million, were reviewed and sent to the collection agency through the Department of Executive Administration.

- Active delinquent accounts greater than $150 and with a City Light credit rating of good or worse are being sent to an Active Receivables Management vendor who will contact them by phone to encourage payment arrangements as of 9/4/02. During the first week, 2,281 customers were referred with total past-due dollars equaling $1.7 million or an average of $731 per account. City Light is developing a tracking report that will monitor vendor performance, providing an opportunity for annual review of the contract.
- Current in-house credit/collections staff are delivering Urgent Notices to persons who have broken promises to pay as of 9/3/02. During the first week, 110 Urgent Notices in the amount of $132,000 were delivered.
- Disconnections will occur only as a last resort and with the approval of the Superintendent upon review of all the available facts.

Key to the entire credit and collection process is producing ongoing timely and accurate bills for customers so they have a realistic idea of what their electricity costs will be throughout the year and can budget accordingly. Surprises are difficult for all customers to absorb, and especially those with limited resources. However, there are customers who simply have difficulty paying their bills, many of whom live in all-electric households and have been substantially impacted by the rate increases and some by third tier. Every effort will be made to get eligible people into appropriate rate assistance programs and/or bill payment assistance programs, whether ongoing or one-time, and generous payment plans will be afforded to customers who work with us.

Developing Audit Routines

Several quality assurance steps are being taken to strengthen City Light's ability to produce an accurate and timely bill and we plan to adopt more as the business process improvements get implemented.

The Distribution Branch has an established audit team to review meter installations and exchanges. The objective is to assure that meters that have been installed are functioning properly. The scope of the program covers all meter installations; however, the primary focus is on large commercial and industrial customers. An ancillary benefit of the audit is the confirmation that the installed meter is properly documented in the billing system.

In addition, new auditing practices have been instituted to ensure the accuracy of accounts and billings, including:

- A review of the daily highest 50 residential bills so that anomalies can be detected and fixed prior to a bill being sent;
- A review of the daily 25 commercial bills that have the greatest change or the highest amount for the same purpose;
- A review of meter exchanges/installs/removals that did not interface properly between CLAMS and CCSS to locate and resolve pending transactions;
- A review of meter reading exceptions to determine patterns or circumstances that need to be addressed;
- The Account Executives who liaison with the top 150 commercial/industrial customers review their bills each month to determine if anomalies are occurring and to troubleshoot problems;

- A review of all DCLU multi-family properties receiving certificates of occupancy between July 1, 2000, and May 5, 2002, to determine their billing status

In the latter review, we experienced a difficult time matching addresses among the DCLU permit/meter maps/CCSS data and in some cases, the counts between meter maps and CCSS did not match. To date, we have found no large buildings that are not being billed, and the addressing issues are being resolved through the review process. The Distribution Branch has developed logging, tracking and audit procedures for the final number of meters requested by a customer, the number of meter sockets installed by that customer, the numbers of meters installed by City Light at that site, and verification that the meters are billed through the first cycle. Implementation date was September 16, 2002.

City Light has requested an auditor in the 2003/04 budget to assist the Deputy Superintendent for Customer Services to develop a more robust audit plan and assist the management of the department to develop audit protocols for the work within their purview. In the meantime, Customer Accounts has restructured the Current Diversion Coordinator position to include analyzing account activity as the core of the job duties.

Developing New Metering Strategies

City Light has a staff of 45 meter readers who are assigned certain routes each day in order to assure that each meter is read monthly or bi-monthly. The meter readers use a hand-held device called Itron to record consumption that shows on the meter. To do this, the meter reader must stand in front of the meter, wherever it is, and manually enter the data into the hand-held Itron. This information is then uploaded into CCSS to either create a bill to a customer or an exception that needs to be reviewed by the Validation Unit.

Meter readers encounter a variety of physical issues as they traverse the service territory to perform their work. In some cases, meters are in locked buildings, basements, gates or porches, requiring access by the owner. In other cases, there are dogs in yards that prevent entry to a fenced-in meter. Sometimes meters are set in places that are difficult to access, such as high on poles or in dangerous areas, such as construction sites. In addition, there has been a building boom of multi-family residences in the past several years that have added thousands of meters to existing routes. Recently installed complex meters require a special device for reading and can take 5-10 minutes to read compared to the seconds required for the average meter reading. These circumstances complicate the job for meter readers and can result in some small percentage of meters unread or misread each day.

To solve the hard-to-access problems, City Light has tested meters that have a radio frequency device that permits the meter reader to automatically read the meter from outside the building while on his/her route. The test showed that the system works in the vast majority of cases and from distances of up to 200 feet. As a result, and in conjunction with Local 17, City Light has ordered 500 of these meters and the meter readers have identified the top hard-to-access meters on their routes. A prioritization process will determine the top 100-200 meters to be replaced this winter, and readers are expected to begin using the remote capability in February. A customer communication plan will be developed to accompany this activity, and the new Meter Exchange business process will be implemented to ensure that the meter exchange transaction is seamless from the customer's perspective. We will monitor the implementation carefully to be

sure that the device is working and meeting the needs of the readers as they begin to utilize this new meter technology that takes advantage of existing hand-held Itron technology.

Information Technology Improvements

Most of the billing processes performed by the utility are highly dependent on information technology, including CCSS and many other systems, such as the Itron meter reading equipment, the CLAMS system used to manage meter assets, and ICSB, a separate system that is used to bill major industrial and commercial accounts. In order to achieve many of the business process improvements described in this document, it will be necessary to make technology improvements.

Much of the current focus is on providing information that will support the design of streamlined business practices. Systems are being enhanced to provide new or enhanced reports that provide status information to management and lead to better process controls. Many of the backlogs in various billing areas require better data to manage workload, perform resource leveling and maintain a forward view of billing trends. When CCSS was implemented, SCL also implemented a data warehouse to provide data extracts, reports and flexible access to customer information. Both systems are being used to:

- Provide meter read and billed consumption histories for particular accounts that require research as a result of a billing exception or a customer inquiry;
- Produce daily reports that track volumes and patterns of meter read exceptions;
- Isolate the highest residential and commercial bills for manual review;
- Reconcile customer accounts to installed meters to identify process failures associated with service installations and meter exchanges; and
- Track quantities of pending service orders by functional business unit and service order type.

Many functional improvements have also been identified for CCSS and ancillary systems. One of the objectives of implementing CCSS was to provide the City's utilities with a viable, commercially available billing system that would be enhanced by the vendor as new software versions became available. The Banner software with which CCSS was built is now four years old and has undergone two major revisions since its release.

Some of the major specific functional areas where improvements are desired include:

- The processes to set up and close accounts need to simplified and streamlined;
- Meter reading parameters should allow for separate criteria for high and low reads and account for numbers of days of service;
- Automated estimating processes should account for the number of days of service;
- Budget billing should simultaneously accommodate monthly billing and bi-monthly meter reads;
- The tools for making adjustments to accounts, particularly for multiple periods, need to be much more efficient; and
- Better integration is required between CCSS (the main billing system) and ICSB (the industrial/commercial billing system).

SCL and SPU are working with the manufacturer to develop specifications for the next release with the goal of installing it during 2004. As we work on the design of long-term technical

improvements, we will also develop interim solutions for the most urgent matters. For example, on budget billing, we will review accounts on a semi-annual basis and revise budget billing amounts according to recent consumption history.

Third Tier Rate

City Light has traditionally charged a low residential base rate that covers a minimal amount of consumption associated with lights and appliances. A second tier rate is then applied to the vast majority of customers who experience consumption beyond the base amount. Starting in January of 2001 and throughout the calendar year, there were rate increases that went into effect as the consequences of drought and extremely high purchased power prices caused City Light spending to increase dramatically. This environment produced media interest in high electricity users and City Council interest in customer conservation through price signals as well as other means. As a result, the City Council adopted a third tier rate for City Light's residential customers, effective July 1, 2001, that essentially doubled the second rate when a certain threshold of consumption was exceeded.

The third tier rate ended up affecting more than 21,500 customers during the period of July 1, 2001, and April of 2002. The impact on all-electric households was great, causing sticker shock as customers opened bills and saw substantial increases above and beyond the other rate increases adopted throughout the year and especially in comparison to prior years' bills. As a result, the third tier played a large role in the high bill complaints that customers registered with the utility. This impact resulted in the Mayor recommending elimination of the third tier rate in its entirety in April of 2002. The City Council, however, chose instead to substantially alter the rate and the threshold at which it takes effect. This action was taken on May 28, 2002, and the new rate structure went into effect on June 14, 2002. The standard rate structure is described in the table below, showing both the old and new third tier rates.

Rates (using standard City residential customer winter rates)

	First Tier	**Second Tier**	**Third Tier**
Former rates	.0425/kWh for first 16/day	.0858/kWh for >16 and <167 kWh/day	.1653/kWh (see threshold below)
Current rates	.0425/kWh for first 16/day	.0858/kWh for >16 and <167 kWh/day	.10/kWh (see threshold below)

Third Tier Thresholds

	Summer	**Winter**
Former thresholds	>60 kWh/day	>125 kWh/day
Current thresholds	>100 kWh/day	>167 kWh/day

These changes should result in far fewer households being impacted by third tier rates over the coming months, likely around several thousand.

Customer Service Training

In an effort to reinforce that courtesy and customer service are a top priority, Seattle City Light and Seattle Public Utilities have worked with a training consultant to develop a customer service training curriculum for literally all staff within their organizations. However, it is likely that a

prioritization process for training will focus initially on persons who play a direct customer service role. In general, the purpose of the training is to reinforce customer service expectations, strengthen internal customer service (often a key to getting an external customer's concerns addressed), and augmenting critical thinking and problem solving skills so customer problems can be addressed quickly. There is also an emphasis on leadership and coaching skills for supervisory and lead positions. The training was developed with the assistance of a focus group of employees and is being piloted in September. Full deployment will commence in October and in subsequent months. The modules for the training are as follows:

	Topic	Description	Course Length	Target Audience
Part I	Ready, Set, Service!	Customer service refresher. Internal & external customers, employee responsibilities.	4 hours	All Employees
Part II	It's not Enough Anymore: The In's and Out's of Customer Service	Session I: Overview of customer protocol skills Session II: Opportunity to continue building on skills with emphasis on more problematic situations.	4 hours 4 hours	All Employees
Part III	What Can Go Wrong, Will Go Wrong	Acquiring the skills of problem solving and sustainability to tackle difficult problems. Designed for those who need to think on their feet, solve problems quickly and understand the principles of customer support and advocacy.	8 hours	All Employees
Part IV	This Could be Tricky: Working with Difficult Customers	Customer service leadership skills. Training in coaching, motivating and encouraging internal customers and employees to continue to strive for excellence in customer service standards.	8 hours	Senior level, Supervisors, Managers, Directors (positions in lead roles)

Because the Call Center administered by Seattle Public Utilities is such a key customer contact point for City Light customers, it is extremely important that both utilities have a shared vision for customer service and consistent policies and practices for staff to follow. To further the development of this unique arrangement, several steps are being taken:

- The heads of the two utilities meet monthly to review performance and develop or refine the shared vision and expectations;
- The heads of Customer Service for the two utilities meet bi-weekly to review performance data and address policy issues;
- The supervisors in the Call Center and Account Services within the Customer Service Branch meet bi-weekly to review emerging issues, share information, create common practice and identify policy issues.
- The heads of the two utilities and their respective customer service staffs have held two quarterly meetings in the Dome Room to discuss issues of mutual importance and to answer questions from employees. It is anticipated that these quarterly meetings will continue for the foreseeable future.

These series of meetings are intended to provide formal and ongoing venues for ensuring that customer service is the highest priority of the City's utilities.

SCL Hearing Officer

City Light's Hearing Officer role is to conduct timely, responsive and fair hearings with customers who have issues with their billings, meters and/or services. The Hearing Officer is, theoretically, the third level of review for customers. Either the Call Center operator or the

Electrical Service Representative in the Distribution Branch is the first level. Their respective supervisors represent the second level. If a customer is still dissatisfied, then the Hearing Officer is asked to hear the facts and render a judgment. Account Services staff may also be asked by the Hearing Officer to perform first level work on cases that go directly to the Hearing Officer without initial review.

The first half of 2002 brought unprecedented appeals to the Hearing Officer – 205 cases received in the first six months of 2002 compared to 50 in the last five months of 2001. The greatest volume of these 2002 cases involved high bill complaints (67%), followed by landlord/tenant issues (18%). The major factor for the high volume of appeals is the rate increases that occurred throughout 2001, including the third tier rates. The high volume of rental unit churn in City Light's service territory also contributes to disputes between tenants and landlords or between tenants when apartments are co-occupied. The improvements City Light is making in its business processes, the elimination of backlogs and the modifications to the third tier should have a positive impact on the Hearing Officer's caseload in 2003.

Several other improvements intended to reduce the workload of the Hearing Officer have been put into place or are being developed.

- Temporary staff has been assigned to the Hearing Officer to provide administrative support and to work on and resolve cases; and
- Procedures are being refined to ensure that entities who work on high bill complaints (the Call Center and the Electric Service Representatives) have tools and protocols to resolve them at the lowest possible level.

In addition, the Hearing Officer has been given new rule-making authority to apply remedies for a variety of circumstances that came to light during the high bill period. This authority is intended to provide customer-oriented solutions that protect the utility's long-term relationships with its consumers and shareholders.

Survey of Other Utilities

City Light is working with the American Public Power Association (APPA) to survey seven other publicly owned utilities regarding their customer service practices and their billing system status. They are Bryan Utilities (Texas); Memphis Light, Gas & Water; Colorado Springs Utilities; Nashville Electric Service; Orlando Utilities Commission; City Utilities of Springfield (Missouri); and Jacksonville Electric Authority. The purpose of the survey is to identify best practices amongst other utilities that are noted for excellent customer service. The survey is comprised of two parts. Part I is a written survey that should take only a few minutes to complete and will provide background information. Part II contains more in-depth questions on organizational and technology issues as they relate to the following areas and will be conducted by conference call.

- Customer Service Delivery and Measurements
- Call Center Function
- Technology
- Contested Utility Bills or Complaints

We expect the survey to be completed this fall and to provide a rich source of information and benchmarking potential. While currently emphasizing the development of internal performance measurement, our goal eventually is to benchmark against others in the business and adopt utility best practices.

Conclusion

City Light has placed tremendous emphasis on improving its customer service over the past several months and some successes have been achieved; others are in process and within grasp. Our goal is to have satisfied customers who receive accurate and timely bills. This seemingly simple goal implies a host of changes that involve hundreds of people interacting internally with each other and a new computer system. It also involves interacting externally with literally tens of thousands of customers needing service. We want to communicate regularly with the pubic on matters of concern for them individually and collectively. Customer service is an attitude, a culture, and a set of skills and behaviors, all of which are under review and revision at this time. We are committed to a series of bunt singles that will result in big eventual wins and a utility in which customers/shareholders have confidence and pride.

APPENDIX A
Performance Measurements

Account Services Division in the Customer Services Branch developed baseline statistics, metrics and performance measures in 2002, which are included in the tables below. The measures have already been adjusted to ensure that they are fair and reasonable but still present challenges to provide a high level of customer service.

METER READING

Activity/Measurement: Read a minimum of 98% of meters each week

Month	Q1	Q2	July	August
Scheduled Reads	560,344	608,190	215,723	207,100
Actual Reads	550,505	598,122	211,479	202,779
Can't Reads*	9,839	10,068	4,244	4,321
% Unread	1.76%	1.66%	1.97%	2.09%

* "Can't Reads" are not bad reads, but usually meters that are difficult to access. We cannot currently track actual bad meter reads, however, in previous years under CIS the number of actual bad reads were less than 1,000 per year. For example, in 1996, the number of bad reads was 688.

NEW ACCOUNTS AND METER SETS (NAMS)

Activity/Measurement: Process all paper Residential Electric Service Applications (RESA) within one week of receipt; process online RESAs within 3 business days of receipt.

- At the beginning of the second quarter, NAMS had a backlog of about 3,700 faxed/mailed applications to process. The suspension of overtime, increase in RESA online activity, and staffing problems left a seemingly insurmountable hill to climb. With help from the Credit Unit, NAMS was able to greatly increase the daily processing of RESAs. The credit group increased the staff processing the faxed/mailed RESAs from 4 people to 14. By June 6, temporary employees were brought in to help. This provided a huge lift to the unit and now they are current on all faxed/mailed RESAs and consistently meet the goal of processing all the applications within one week of receipt.

The online RESA activity has been consistently increasing from month-to-month, week-to-week, and day-to-day. In almost every month there was a record breaking week or day. Two employees process these and manage to stay current. The additional of TES staff helps insure that NAMS meets the goal of processing the on-line RESAs within 3 business days of receipt. However, due to the increase in on-line RESAs, the permanent staff are no longer available to help with faxed/mailed RESAs. As the asterisk indicates, the only time we do not meet this goal is when customers send applications with future move-in dates or the account is in the in-block period, which prevents a move to take place on the accounts. The in-block period is the period when meter reading information is downloaded to the meter readers until the meter is read, uploaded to CCSS, and charged. The good thing is that the customers who use the on-line method give us advance notice of changes in tenancy. This helps to decrease the number of bills we have to cancel to correct move-in or move-out dates.

Month	Online RESAs received/ processed within 3 days	# of Online RESAs over 3 days old	Faxed or mailed RESAs received/ processed within 1 week	# of faxed/ mailed RESAs over 1 week old
May	710 / 647	63	3573 / 2726	847
June	699 / 599	100*	3451 / 2881	45*
July	711/526	36	3415/3198	84
August**	597/538	45	3404/2865	170

* These RESAs have move-in or move-out dates in the future and cannot be processed until those dates.

** One week of August data is missing.

Activity/Measurement: Process meter removals and exchanges within 3 business days of receipt.

- NAMS experienced the same problems with controlling the backlog in meter work as they did with the RESAs. Temporary employees and 3 existing employees received training on how to process meter removals. With carefully managed overtime and help from employees from North Customer Engineering, NAMS began to reduce the backlog. These borrowed employees helped to clear the CLAMS-to-CCSS interface table to reflect accurate information.

Currently NAMS has completed all backlogged meter removals and are now current with new meter removal orders. The next quarter they will resolve the backlogged meter exchanges in the CCSS tables. NAMS is current on all new work coming in.

Month	Number received with complete information	Number completed within 3 days	Number remaining to be completed	Date of oldest exchange
May	730	287	425	6/01/01*
June	791	347	163**	6/01/01*
July	355	241	178	7/15/02
August**	406	233	38	2/13/02

* This is the same meter exchange and we are awaiting information to complete it.

** One week of August data is missing.

It should also be noted that we have begun to coordinate with Technical Metering so that meter exchanges are done in conjunction with billing cycles. This minimizes exceptions that might be generated and minimizes the billing adjustments that might be needed.

ACCOUNT VALIDATION

Activity/Measurements: Process meter exceptions within two weeks

- The oldest exception is the result of an account that has not posted a read since February. Generally, we can use an action code or get a special reading estimate usage to generate a bill. In a few cases, a Problem, Issue and/or Concern (PIC), such as in this case, is required for the CCSS team to fix the problem. In 2002 through August 31, there have been 137,426 meter exceptions generated; 140,461 have been worked since the beginning of the year. The backlog has been declining since the spring.

Month	Total number of exceptions received	% of daily bills	High	% of daily bills	Missed	% of daily bills	Total # worked	# of Unprocessed Exceptions > 2 weeks old
May	16,096	5.16%	6,518	2.09%	3,749	1.20%	14,667	NA
June	14,013	5.22%	5,800	2.16%	2,840	1.06%	15,173	2,504
July	17,140	5.26%	6,562	2.01%	3,996	1.23%	17,650	2,594
August*	17,373		7,426		4,111		17,523	2,443

* Due to a reporting change, the upload numbers were not available in August.

Activity/Measurement: Process all service orders within two weeks

- The service order backlog is 2,941 and this is why no service orders have been completed within the 10 day goal. Once the backlog is reduced, we expect to remain current and meet our goal.

Month	Number of Service Orders Received	Number Completed	Number completed within 10 business days	Number sent to field for additional info	Number of service orders > 2 weeks old
May	1,719	781	0	389	NA
June	1,713	1,102	0	159	2,740*
July	1,335	679	9	178	2,637*
August	1,259	843	58	378	2,456

* Estimated

ACCOUNT CONTROL

Activity/Measurement: Process all ACH accounts within 5 business days.

- SCL processes requests for automatic bank withdrawal for both SPU and SCL customers. The backlog that was experienced in August has been eliminated in September and we are now current with all new ACH requests.

Month	Number of ACH Requests Received	Total Number of ACH Requests Completed	Number of ACH Requests completed within 5 days	Number of Uncompleted ACH Requests
May	456	350	NA	50
June	459	336	NA	21
July*	123	99	90	100
August	389	351	352	141

* Two weeks of July data are missing.

APPENDIX B

LOW INCOME ASSISTANCE

Seattle City Light, in cooperation with other City, state, federal and private agencies, provides a comprehensive variety of services and programs to low-income customers.

Rate Assistance Program

Our rate assistance program provides a greater than 50% rate subsidy to low-income customers. This program also waives fees for trouble calls and account change fees. Since the cost of utilities is factored into rent subsidies, rate assistance does not apply to customers in subsidized housing.

Rates REC and RES apply to customers who are over 65 or disabled and have a household income less than 70% of the Washington state median income.

Rates RLC and RLS apply to customers who receive SSI or whose household income is less than 200% of the federal poverty level (FPL). Prior to March 2001 the income guidelines were 125% of FPL. The increase in the number of participants would indicate that our outreach efforts and the expansion of the program has been helpful:

In October 2001, 12,511 customers were on rate assistance.
In September 2002, 14,257 customers are on rate assistance.

Utility Rate Assistance Program for Low-Income Households

This program extends rate assistance to individuals living in older buildings that are master metered. The building owner receives a credit, which must be passed on to the renter, for tenants who meet the income guidelines for rate assistance outlined above. A pilot program began in 1999. Five buildings are currently participating.

Energy Assistance Program (EAP)

The federally funded EAP is administered through the state by the Central Area Motivation Program (CAMP) and the North and South King County Multi-service Centers. It provides once per year heating grants to customers with incomes below 125% of the federal poverty level.

In 2001, 8,005 City Light customers received $1,544,001 in grants.
In 2002 through August, 7,027 customers received $1,746,906 in grants. Additional customers will be served as funds for the 2002/2003 winter become available when the new program year begins in November.

Emergency Low-Income Assistance Program (ELIA)

ELIA began in 1986 and is funded by an endowment from Seattle City Light. It is intended to supplement EAP and provides a credit of 50% of the customer's delinquent balance up to a credit of $200 once per year. Customers must have received a disconnect notice and have qualified for EAP in the last year.

In 2001, 1,241 customers received $198,709.
In 2002 through August, 1,012 customers received $150,755.

Project Share

Project Share is funded by customer donations and thus has no federal or state-imposed restrictions. Assistance is available to customers who have exhausted other forms of assistance and is intended to prevent disconnection or restore electrical service to customers with incomes below 70% of the state median. To meet unusual circumstances, there are waiver provisions that allow higher levels of assistance and assistance to customers with higher incomes. Project Share will pay 50% of a delinquent bill up to $500. The customer is expected to make a co-payment and payment arrangements on their remaining balance.

In 2001, we received $333,500 in customer donations.
In 2002, through June, we received $172,332 in customer donations.

In 2001, 2,481 customers have received $476,386 in assistance.
In 2002, through August, 1,335 customers received $506,272 in assistance.

Budget Billing Plan

Though not strictly a low-income program, Seattle City Light offers Budget Billing to all residential and small commercial customers. The plan evens out bill payments throughout the year and helps customers more easily plan their budgets. At any given time there are about 16,000 customers on Budget Billing.

Low-Income Electric Program (LIEP)

The Low-Income Electric Program is funded by Seattle City Light and administered by the City's Office of Housing through its HomeWise Program. It provides weatherization for electrically-heated residential buildings of 1-4 units. Gross income for owners must be below 80% of the Seattle area median income. For rental units, at least 50% of the renters must have incomes at or below 60% of the Seattle area median income.

In 2001 the program contracted to serve 67 housing units in 59 buildings.
Through August 2002, the program has contracted to serve 36 housing units. An additional 31 units have been determined to be income-eligible and are in the production pipeline, and another 52 units are awaiting determination of income eligibility.

Low-Income Multifamily Electric Program (LIMEP)

Similar to the LIEP, LIMEP is funded by Seattle City Light but for building of 5 units or larger. LIMEP offers financial incentives to property owners to weatherize multifamily structures. Fifty percent of a building's tenants must have household incomes at or below 60% of the Seattle area median income.

In 2001, the program contracted to serve 389 units in 10 buildings.
Through August 2002, the program has contracted to serve 583 housing units in six buildings.

Built Smart for Affordable Housing

This program provides financial incentives to developers of new or rehabilitated low-income and affordable housing projects. The incentives provide energy savings beyond those required by the energy code. Buildings must have 3 or more units and all of the tenants must have incomes at or below 80% of the Seattle area median income. The program includes free lighting consultations, technical assistance for water conservation and waste recycling, and assistance coordinating the project with other City departments.

In 2001 the program contracted to serve 501 units in 12 building.
Through August 2002, the program has contracted to serve 189 units in six buildings.

Bonneville Power Administration (BPA) Weatherization

BPA provides funding to the City's Office of Housing for weatherizing residential structures. The customer's household income must be at or below 60% of the Seattle area median income. This program supplements other assistance provided by City Light.